Observations Based on a Comparison of Recent Arsenic Cost Tools

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The USEPA has recently released the "Cost Estimating Tool for Arsenic Removal by Small Drinking Water Facilities" (ARCE). The American Water Works Research Foundation, AwwaRF, is developing a similar tool called "Arsenic Adsorbent Design and Costing Tool" (AADCT). The latter tool is presently available as a beta testing version to the review members. AwaaRF is expected to release the final version of this model later this year. Both arsenic costing tools are written for PC-based computers using a combination of Excel® and Visual Basic® (VB) algorithms. A comparison of input parameters, implicit assumptions, algorithms and output parameters is presented. Aspects related to user friendliness, applicability for small communities and engineers, as well as future relevance of the present tools are also discussed. Product water cost estimates ($/1000 gal) for similar input parameters are significantly different as a result of varying assumptions leading to alternate approaches to cost estimation. On the other hand, the value of these tools is considerable to decision-makers, who can reach rapidly important conclusions regarding arsenic treatment technologies. Examples of such conclusions regarding product water cost as function of adsorbent unit cost are presented.

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